State of Washington
Governor's
Salmon Recovery
Office

Statewide Strategy to Recover Salmon

RESPONDING TO FEDERAL
ENDANGERED SPECIES ACT LISTINGS
"THE WASHINGTON WAY"

Contents

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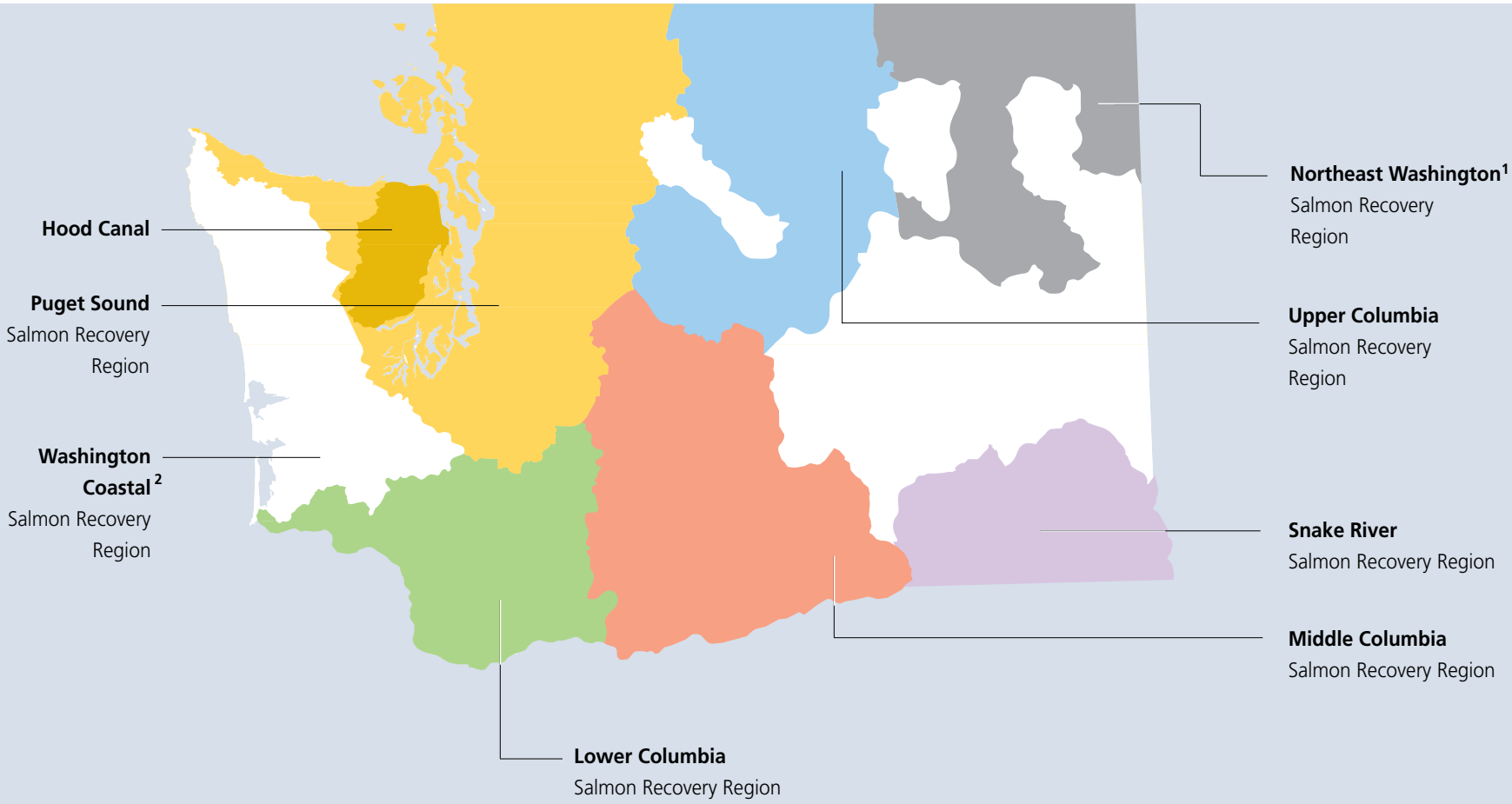
Salmon Recovery Regions



1 Not developing salmon recovery plans at this time.
2 Lake Ozette Steering Committee, under NMFS guidance, preparing Lake Ozette sockeye recovery plan.

Preface

Washington's Statewide Strategy to Recover Salmon — *Extinction is not an Option* — was published in 1999. It recognized strategic regional and watershed actions were essential to success. In consultation with the National Marine Fisheries Service, United States Fish and Wildlife Service, and Washington Department of Fish and Wildlife, the Governor's Salmon Recovery Office (GSRO) identified seven salmon recovery regions; subsequent to that time, these regions have evolved, and six self-created groups have developed plans that have been submitted jointly with GSRO to the federal agencies as recovery plans under the federal Endangered Species Act section 4(f). These plans also meet the requirement of Washington's Salmon Recovery Act RCW 77.85.030(1).

The Statewide Strategy set a standard for these recovery efforts. It says our vision is to "restore salmon, steelhead, and trout to healthy harvestable levels and improve habitats on which fish rely." The goals include an emphasis on wild productive and diverse populations, a commitment to ensuring our actions benefit salmon, and an approach that encourages participation from citizens and recovery partners. The GSRO approves regional plans that are submitted to the federal agencies, and all regional plans approved by the GSRO meet this standard.

These plans will certainly change as they are implemented. Our commitment to adaptive management requires we evaluate the effectiveness of our actions in accomplishing our goals, and we will adjust as information guides us on this long journey.

"The goals include an emphasis on wild productive and diverse populations, a commitment to ensuring our actions benefit salmon, and an approach that encourages participation from citizens and recovery partners."

"Our approach must integrate economic and environmental concerns in a way that engenders a new kind of prosperity for our state, one that enriches today without impoverishing tomorrow."

GOVERNOR CHRISTINE GREGOIRE

A letter from the Governor

Dear Readers:

Our wild salmon are in trouble. Fifteen salmon species, dispersed throughout 75 percent of Washington State, are listed under the Endangered Species Act. While significant challenges are before us, I have hope for the future. Our state has a tradition of fighting to preserve its quality of life and a commitment to passing on a strong legacy of stewardship to future generations.

The key to creating the recovery plans summarized in this report, and to our success over the long-term, is collaboration. People throughout the state, representing agriculture and business, state and tribal governments, watershed coalitions, volunteer organizations, and other interested stakeholders have participated in a historic process that well may be unique within the United States. We did not wait for the federal government to tell us what to do; we rolled up our sleeves and got to work. We took our own initiative to develop salmon recovery plans that came from the bottom up, not the top down. As Governor, I am proud of this tradition and call it working together "The Washington Way."

Now, the real work begins. We need to implement these plans, translating them into real actions with real results that will benefit both human and fish populations in the generations to come.

We must leverage our resources and clearly demonstrate a good return on taxpayer dollars. Our approach must integrate economic and environmental concerns in a way that engenders a new kind of prosperity for our state, one that enriches today without impoverishing tomorrow.

This is not an easy task. The problems we must address were years in coming and they will take years to correct. But by working together in a spirit of cooperation, by bearing in mind that what we do will make a lasting difference in Washington State, and by renewing our commitment to creative problem solving, I have no doubt that we can get the job done.

Thank you for your interest in, and dedication to, protecting this important part of our shared heritage.

Sincerely,

CHRISTINE O. GREGOIRE
WASHINGTON STATE GOVERNOR
JANUARY 2006

The Endangered Species Act | Listing a Species

To appreciate Washington's recovery plans and get a good picture of what to expect from their implementation, we need first to understand the foundations for listing salmon and steelhead.

The federal government lists a species when it has determined there is sufficient scientific evidence to conclude there is a danger to the continued existence of the plant or animal throughout all or a significant portion of its range. The National Marine Fisheries Service (NMFS) made decisions about Washington's salmon on the basis of two aspects:

- The species' biological status, and
- Listing factors that contributed to the species' decline

These two aspects are addressed very specifically by NMFS when they list the species. Status is determined using technical viability criteria, and factors are determined using categories identified in the Endangered Species Act. These same factors must be evaluated when making the decision to de-list.

Biological Status: Viability Criteria

A viable salmonid population (VSP) is one that negligible risk of extinction over a 100-year time frame and supports a minimum number of fish defined by NMFS. NMFS will judge viability of the species, or Evolutionarily Significant Unit (ESU), based on abundance, productivity, distribution, and diversity.

Listing Factors

ESA requires that five criteria be evaluated when making a decision to list a species. These criteria, called "listing factors," are generally analyzed in terms of threats and factors that limit recovery. We usually refer to these threats as the "4 H's" and include habitat, harvest, hatcheries, and hydro, plus natural factors such as disease and predation. NMFS determines the impacts of these factors and what role they play in the decline, as well as protective efforts that may be occurring to ease their effect.

ESA requires that five criteria be evaluated when making a decision to list a species. These criteria, called "listing factors," are generally analyzed in terms of threats and factors that limit recovery.

Five General Listing Factors in the ESA

- Present or threatened destruction, modification, or curtailment of a species' habitat or range
- Over-utilization for commercial, recreational, scientific, or educational purposes
- Disease or predation
- Inadequacy of existing regulatory mechanisms
- Other natural or human made factors affecting the species' continued existence

Four Parameters Are Used by NMFS to Define Viability

Abundance This is the number of adults on the spawning grounds - the sizes of populations. NMFS considers abundance important because, all else being equal, smaller populations are at greater risk of extinction than large populations.

Productivity This is population growth rate; that is, over time for each fish that spawns, how many fish return. A population does not change if one fish returns for every fish that spawned. A population cannot persist when productivity is less than that, and grows when more fish return for each spawner.

Distribution This is the distribution of fish among and within habitats they use throughout their life cycle. Habitat is needed for all life stages in a distribution that reduces risk of mortality from catastrophic events, but close enough to allow fish to connect with one another.

Diversity This is variation and includes such things as genetics, life histories, physical traits of the fish (size, age, timing of the runs, migration patterns) and influences of hatchery fish. We need to avoid further reductions in natural diversity so that fish can survive short and long term changes in the environment.

Bull Trout on a Different Path

The US Fish and Wildlife Service listed bull trout in 2000. They drafted a recovery plan that was published for public comment in the Federal Register in 2004. They are currently doing their five-year review of the status of the species. When that is complete, they expect to resume the public process for completion of the recovery plan — likely some time in 2006. We have been assured materials produced in our regional recovery plans will be incorporated as their recovery plans progress.

The Endangered Species Act

Summary of Listing Criteria | Risk of Extinction

SALMON REC. REGION	ESU [1]	CURRENT LISTING [2]	RISKS TO VIABILITY [3]	LISTING FACTORS [4]
SNAKE RIVER	Snake River Sockeye	Endangered	Extremely high for all 4 factors	Hydroelectric generation facilities and their operation; agriculture; logging; urbanization (including residential and industrial development); recreation, and harvest
	Snake River Spring/ Summer Chinook	Threatened	Moderately high for abundance and productivity, lower for spatial structure and diversity	
	Snake River Fall Chinook	Threatened	Moderately high for all 4 factors	
	Snake River Basin Steelhead	Threatened	Moderate for abundance, productivity, and diversity; higher for spatial structure	
UPPER COLUMBIA	Upper Columbia River Spring Chinook	Threatened	Strong concern for abundance and productivity, less concern for spatial structure and diversity	Degraded floodplain and channel structure; degraded riparian; impaired fish passage in tributaries; harvest-related adverse effects; mainstem hydro mortality and related effects
	Upper Columbia River Steelhead	Threatened	High for productivity, lower for abundance, diversity, and spatial structure	
MIDDLE COLUMBIA	Middle Columbia River Steelhead	Threatened	Moderate for productivity, spatial structure and diversity, greater for abundance	Harvest; irrigated agriculture (including storage dams, conveyance, and diversions); hydropower development; urbanization and rural development; forestry; road development

1 Evolutionarily Significant Unit. NMFS considers an ESU a "species" under the ESA.

2 As of June 28, 2005.

3 Also called Viable Salmonid Population (VSP) risks. NMFS assesses the risk to species and, hence, whether to list them under the ESA, by evaluating the viability of ESUs. For each ESU, the extinction risk for four factors — abundance, productivity, spatial distribution, and diversity — was assessed. These risks must be addressed to de-list the fish.

4 Listing factors are identified in the ESA and include present or threatened destruction or modification of habitat; over harvest; disease or predation; inadequacy of regulatory mechanisms; other natural or human factors. The effects of hatchery artificial propagation programs were evaluated on the basis of these factors, and for all ESUs the conclusion was that hatchery programs do not substantially reduce extinction risk.

SALMON REC. REGION	ESU [1]	CURRENT LISTING [2]	RISKS TO VIABILITY [3]	LISTING FACTORS [4]
LOWER COLUMBIA	Lower Columbia River Chum	Endangered	High for all categories, particularly spatial structure and diversity	Habitat degradation, especially as a result from sedimentation, fragmentation, and loss; hydropower effects; hatchery effects; over harvest in commercial and recreational fisheries; disease and predation; inadequate regulatory mechanisms; non-native species effects
	Lower Columbia River Coho	Threatened	Extremely high for all 4 factors	
	Lower Columbia River Chinook	Threatened	Moderately high for all 4 factors	
	Lower Columbia River Steelhead	Threatened	Moderate for all 4 factors	
HOOD CANAL	Hood Canal Summer Chum	Threatened	High for all categories	Habitat loss, especially degradation and loss of lower floodplain, estuary, and nearshore marine; over-harvest; stream flow changes
PUGET SOUND	Puget Sound Chinook	Threatened	Moderately high for all 4 factors	Passage obstructions; forest management; agricultural practices; urban and rural development; stormwater; toxics; flow conditions; channel function; dredging in estuaries and lower mainstem; floodplain functions; nearshore processes; harvest; enforcement of existing regulations; hatcheries
	Puget Sound Steelhead	Currently under review	Under review	
COASTAL	Ozette Lake Sockeye	Threatened	Moderately high for all 4 factors	Stream and beach sedimentation; loss of riparian areas; loss of large woody debris

The Endangered Species Act | Recovery Plans

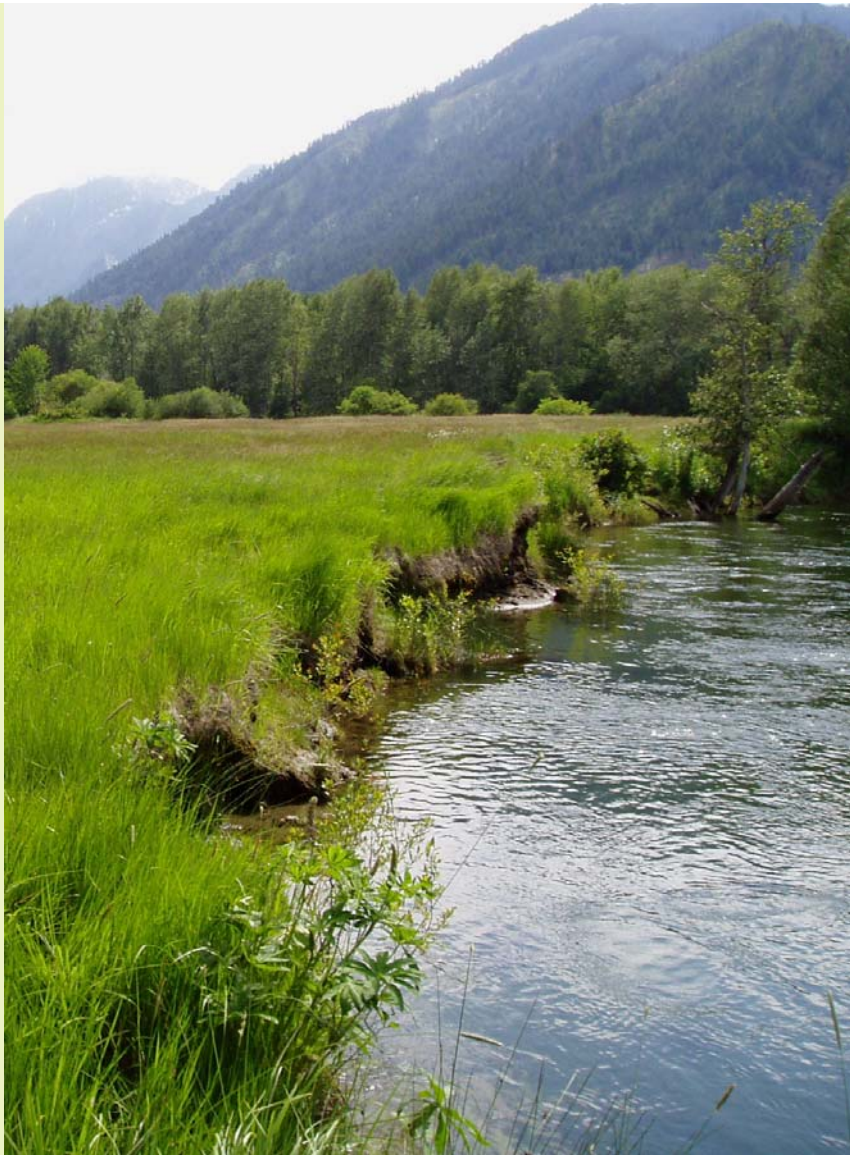
Six Washington salmon recovery organizations have completed draft recovery plans and submitted them to NMFS and USFWS.

Under ESA section 4(f) a recovery plan must include the following:

- Site-specific management actions necessary for the conservation and survival of the species,
- Objective, measurable criteria which, when met, would result in a determination that the species be removed from the list (i.e., de-listing), and
- Estimates of the time required and cost to carry out those measures needed to achieve recovery

In addition to the statutory requirements, NMFS requires that recovery plans contain a more general statement of goals and a recovery strategy that describes the overall approach to recovery for the species.

Washington's recovery plans follow an outline developed by the state and approved by NMFS, and meet criteria established in the ESA. The plans do not obligate any party other than NMFS, and are not enforceable or regulatory. They set goals and identify actions that would, if implemented, lead to recovery of the listed species. In developing these plans through local groups, we believe it is more likely that the actions identified reflect local circumstances and will be undertaken. Thus, we have a better chance of recovering species because of this local ownership.



The Endangered Species Act | De-listing a Species

ESA de-listings occur at a point when a listed species and its ecosystem are restored and the future is safeguarded so that protections under the ESA are no longer needed. Decisions to de-list are based on a species' biological status (the biological de-listing criteria) and on the status of the listing factors (both threats and limiting factors) to the species, as identified in ESA section 4(a)(1).

The ESA listing factors, and not recovery plans, are the legal basis upon which de-listing decisions will be made. These listing factors were published in the Federal Register on June 14, 2004 for all west coast salmonid ESUs. In this notice, NMFS described its process for making listing determinations, including scientific analyses that evaluated ESU viability, factors for decline, and efforts being made to protect the ESU.

NMFS must conduct status reviews of all listed ESUs at least once every 5 years to determine whether the ESUs should be removed from the list or changed in status.

Criteria for Review Include:

- **Technical analyses and recommendations regarding viability criteria, including**
  - Number of viable populations
  - Number and status of populations
  - Status of core populations
  - Distribution of viable populations relative to the range of historical conditions supporting viable populations
  - Linkages and connectivity among viable populations
  - Diversity of life history and phenotypes expressed
  - Considerations regarding catastrophic risk
- **Any new information on population and ESU status and new advances in risk evaluation methodologies**
- **Analysis of listing factors (threats) criteria, including**
  - Present or threatened destruction, modification, or curtailment of a species' habitat or range
  - Over-utilization for commercial, recreational, or educational purposes
  - Disease or predation
  - Inadequacy of existing regulatory mechanisms
  - Other natural or man-made factors affecting continued existence